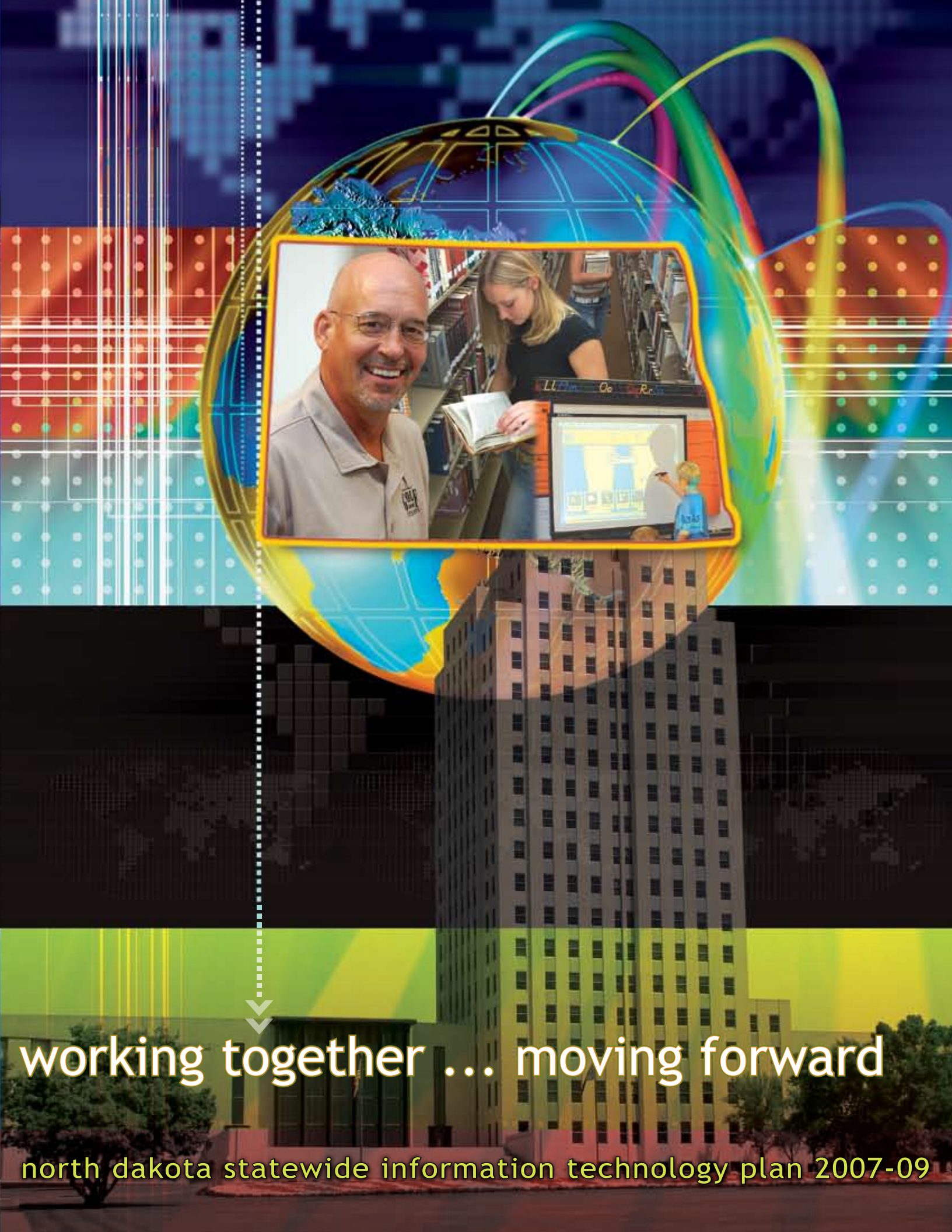


working together ... moving forward

north dakota statewide information technology plan 2007-09

North Dakota Statewide
Information Technology Plan
www.nd.gov/ep/state

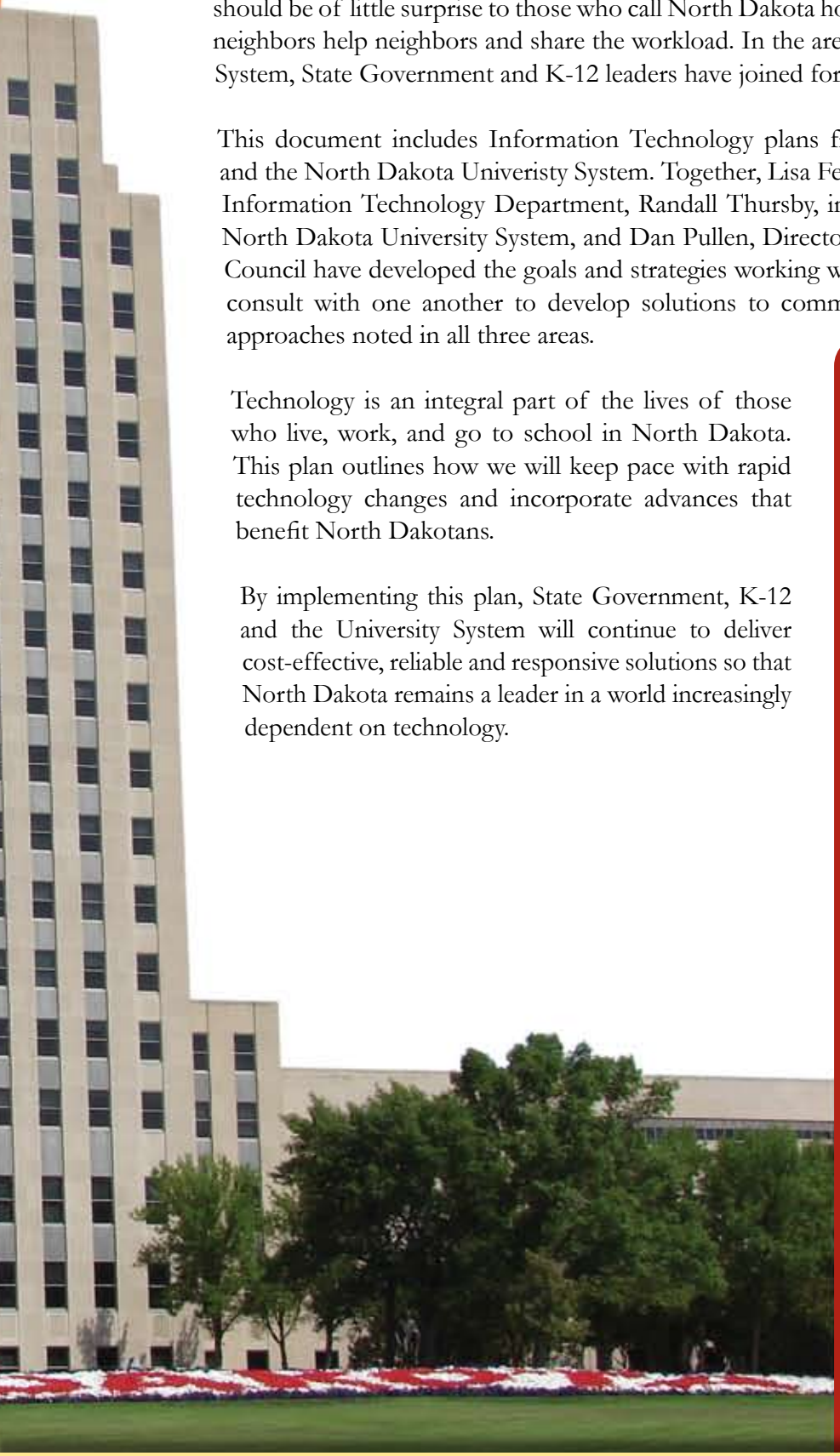
working together ... moving forward

A recent internet search returned around 9,910,000 hits for "North Dakota working together", this should be of little surprise to those who call North Dakota home. North Dakotans have a culture where neighbors help neighbors and share the workload. In the area of technology, North Dakota University System, State Government and K-12 leaders have joined forces to serve the needs of the state.

This document includes Information Technology plans from State Government, K-12 Education and the North Dakota Univeristy System. Together, Lisa Feldner, Chief Information Officer with the Information Technology Department, Randall Thursby, interim Chief Information Officer for the North Dakota University System, and Dan Pullen, Director, North Dakota Educational Technology Council have developed the goals and strategies working with their own stakeholders. They regularly consult with one another to develop solutions to common requirements as shown by recurring approaches noted in all three areas.

Technology is an integral part of the lives of those who live, work, and go to school in North Dakota. This plan outlines how we will keep pace with rapid technology changes and incorporate advances that benefit North Dakotans.

By implementing this plan, State Government, K-12 and the University System will continue to deliver cost-effective, reliable and responsive solutions so that North Dakota remains a leader in a world increasingly dependent on technology.



government

working together ... moving forward

overview

Lisa Feldner, CIO
Information Technology Department

"***Working together"*** is an appropriate theme for North Dakota's State Technology Plan. Transforming technology in state government is not the responsibility of a single agency. It is a shared responsibility of all agencies, working collaboratively, to build an enterprise infrastructure that supports agencies' business processes and delivers government services to the citizens of North Dakota.

Two primary drivers of the collaborative process are Enterprise Architecture and the State Information Technology Advisory Committee (SITAC). The SITAC membership is comprised of representatives from multiple state agencies, the legislature and the private sector. The SITAC reviews large technology projects from all agencies. Through this process, duplicative activities can be identified and shared solutions can be planned. Enterprise Architecture is the process for setting technology direction at the grass-roots level and making recommendations for shared standards. The two processes act as gatekeepers for pending technology projects. The goal is to maximize technology value by making services more efficient, useful, responsive, accessible and re-usable.

As we move to a collaborative approach, shared services have resulted in significant cost savings for each information technology dollar expended. For example, through the cooperative efforts established by Enterprise Architecture, state government and education saved $2.8 million over 18 months on the purchase of desktop and laptop computers.

As you will see in the strategic plan that follows, there are multiple examples of collaborative technologies proposed for the coming biennium. These systems will be created and maintained in a cost-effective and efficient manner while safeguarding privacy and confidentiality. These technologies include a hub and spoke architecture allowing multiple applications to share data instead of duplicating it for each application. The systems also utilize what is called Service Oriented Architecture (SOA) which means that functionality is developed once and can be reused by multiple agencies through loosely coupled interfaces.

We are committed to the fulfillment of these and other critical information technology objectives. The State is "moving forward" with the tools and resources necessary to plan and implement cost effective technology solutions that will benefit the citizens of North Dakota.

North Dakota State Government Goals:

1. Improve the delivery of government services by expanding the use of online and automated systems.

2. Meet changing business needs by providing dependable, robust systems.

3. Allow informed decision making by securely collecting and disseminating information.

4. Maximize the value of technology by collaborating to provide shared solutions.

goal(1)

Improve the delivery of government services by expanding the use of online and automated systems

North Dakota state government has made great strides in service delivery through the use of technology. Some examples of the way technology enables better service are the use of electronic document management systems to deliver information faster and the use of online transactions to deliver service anytime, anywhere.

We continue to look for ways to become more convenient, more efficient and more accommodating to meet the expectations of our citizens.

Strategies

1. To improve navigation and usability of the state portal and agency web sites.
2. To continue to incorporate e-government services into agency standard business processes.
3. To use automation to improve the efficiency of state government.

Initiatives

- **Upgrade Website** – The Department of Veterans Affairs will update its website to improve communication and accessibility of information to the public.

- **Electronic Deposit and Electronic Benefits Transfer (EBT)** – Job Service North Dakota (JSND) plans to deploy a system to provide direct deposit and electronic benefits transfer to claimants.

- **Web Portal** – Workforce Safety and Insurance (WSI) will develop a single point of entry, a consistent look and feel, and a cohesive method of connectivity for WSI systems, staff and stakeholders.

- **Customer Relationship Model** – Workforce Safety and Insurance (WSI) will deploy a state-of-the-art tool to better manage stakeholder information and contacts, improving customer service and staff productivity.

- **Electronic Vital Event Registration (EVER)** – The Department of Health will add electronic submission of death and fetal death information to EVER, the system that currently handles electronic birth registration. This will bring North Dakota into complete compliance with federal requirements ahead of schedule.

- **Agency Document Storage** – The Attorney General's Office plans to implement an application to manage documents, images, voice clips, etc., that will integrate with agency applications seamlessly and to provide workflow and electronic signoff for documents.

- **Document Space Solution** – The Securities Department will implement a document scan, file, storage and retrieval system to reduce the space requirements and improve accessibility.

- **Special Education Individual Education Program (IEP)** – The Department of Public Instruction (DPI) plans to deploy a web based special education case management system allowing for a more streamlined special education process, increased monitoring capabilities, enhanced data reporting capabilities, improved management tools and an improved student contract system.

- **New Web Application with Calendar for Non-Profits** – The Department of Commerce plans to develop a web-based calendar to allow non-profit organizations to post information on their events.

- **Web Services for Interstate Connection Network (ICON)/Interstate Benefit Inquiry (IBIQ)** – Job Service North Dakota (JSND) plans to deploy a web service to support the Unemployment Insurance (UI) Interstate Benefit Inquiry and Interconnectivity process.

- **Digital Recording of Hearings** – The Office of Administrative Hearings and Workforce Safety and Insurance will deploy digital recording equipment to significantly reduce the expenses related to court reports needed at the various hearings. The associated software will also provide a more efficient search for the administrative law judges.

- **Video Conferencing** – In an effort to reduce costs associated with travel to attend various meetings, the Veterans Home Administaration will install and use video conferencing.

- **Enhanced Records Management System (ERMS)** – The Judicial Branch seeks to implement an Enhanced Records Management System to reduce the cost of paper storage and improve document access.

- **Learning Management System** – Workforce Safety and Insurance (WSI) plans to deliver online training via an e-learning system to its policyholders regardless of where they reside.

- **Searchable Collections** – The Historical Society will deploy a website to allow access to collections in a searchable format.

- **Grants Management System** – The Department of Emergency Services will purchase and implement a system to manage the federal grants received by the department.

- **Computer Aided Dispatch (CAD)** – The Department of Emergency Services plans to deploy a Computer Aided Dispatch system to allow the dispatchers to be more efficient while handling incident information and to improve the safety of the responders.

- **Automated Evidence Tracking** – The Highway Patrol will purchase an Evidence Tracking System to ensure accurate tracking and management of evidence including liquor, weapons and drugs.

- **Inmate Medical System** – The Department of Corrections and Rehabilitation (DOCR) will deploy the Inmate Medical System Module of ITAG, its offender management system, and Electronic Document Management System (EDMS) technologies. This module will provide electronic medical records for inmates, improving the efficiency of the department's medical staff.

- **Electronic Filing** – The Department of Corrections and Rehabilitation (DOCR) plans to use FileNet as its electronic filing system reducing paperwork handling.

- **The Lottery and Education Systems** – The North Dakota Game and Fish Department will convert its current lottery and education systems to web-based applications which will reduce the redundant data stored as well as improving access to the data.

- **Online Parks Management System** – The Parks and Recreation Department plans to deploy a comprehensive online Park Management System that will allow the public to reserve campsites, cabins and facilities; purchase annual passes; and eventually reserve rental equipment 24 hours a day online. This system will also be used by park staff to reserve, modify and maintain campground reservations along with rental equipment. An additional feature of this program will allow purchase of out-of-state snowmobile permits and registration for safety classes.

Improve the delivery of government services by expanding the use of online and automated systems

government

Accomplishments

Re-employment – Job Service North Dakota (JSND) has deployed enhancements to Unemployment Insurance Internet Claims Entry (UI ICE) to automate reemployment services for unemployment insurance claimants.

Electronic Payments – Job Service North Dakota (JSND) enhanced the Unemployment Insurance Employer Account System (UI EASY) to allow a user to import a file containing Automated Clearing House (ACH) debit payments for multiple employers. This will allow providers that handle multiple employer accounts to submit payments electronically without logging into each client's account.

Digital Driver License System (DDLS) – The Department of Transportation (DOT) issued a request for proposal in July of 2005 to replace the contract with the previous DDLS vendor that expired on June 30, 2006. A new vendor was selected and a new hardware/software application was deployed to provide driver licenses and identification cards at the 48 driver license testing locations statewide the month prior to the contract expiration. A number of additional security features were added to the new card design and it also provides for the incorporation of the source document scanning that will be required by the Real ID Act.

ConnectND Activities – Functionality was added through PeopleSoft product upgrades and enhancement projects, improving the system performance and providing production support. Additional functionality includes:

- Viewing of ePay, eBenefits, and leave balances for state employees was completed. Over 7,000 employees can view eApp information reducing the need to print pay advices.
- Human Resource and Financial environments have been created for agency ad-hoc reporting.
- Comprehensive Annual Financial Report reporting has been configured and developed.

Eligibility Reviews – Job Service North Dakota (JSND) is now completing eligibility reviews for unemployment insurance claimants on-line.

Geological Information System (GIS) – The Department of Transportation GIS "field applications" now include a Linear Soils application running on a ruggedized tablet PC with a Bluetooth enabled Trimble Global Positioning System (GPS) unit and two GeoXTs (Trimble's handheld GPS unit) for the gravel prospecting crews. The field collection units are running customized ArcPad applications that dramatically increase productivity in the field and in the office.

Right-of-Way Plats were scanned, indexed, and spatially joined so anyone within the Department of Transportation (DOT) can access the right-of-way plats from their desktop.

In June, **images from the entire roadway system** were made available to any user in the central office or in the eight districts. Over six million images can be "driven" directly from the user's desktop.

The **"map" portion of the internet** has been updated and enhanced to include County Base Maps, Traffic Maps, and the Transportation Information Map. New interfaces to the Road Report, Load Limit and Road Construction Maps were also completed.

Commercial Vehicle Information Systems and Networks (CVISN) – The Department of Transportation rewrote the Motor Carrier Systems (International Registration Plan and International Fuel Tax Agreement) into a web-based application which allows motor carriers to electronically file their renewal applications, quarterly fuel tax reports and vehicle registrations. This eliminates the need for submitting paper documents that need to be reentered by department staff and mailed back to the carrier. The carrier can now obtain real-time temporary credentials 24/7.

Department of Game and Fish added the following functionality to their website:

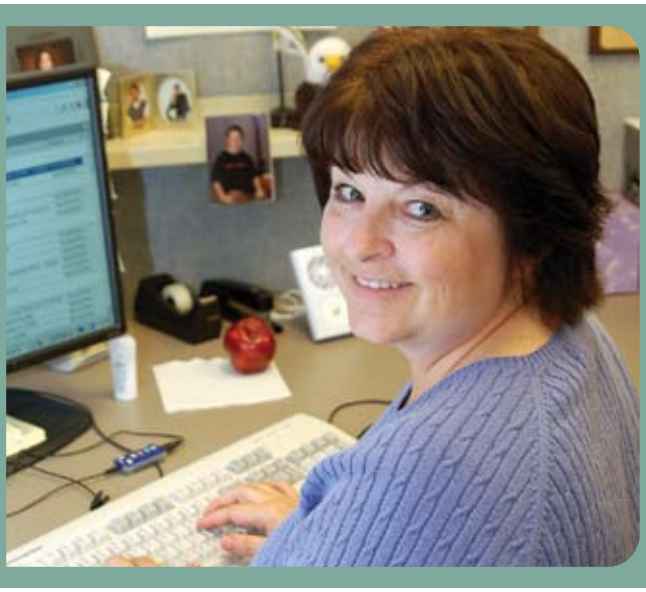
Hunter Education Course Registration – This system enables students to sign up for instructor led Hunter Education courses through a web application. Previously, paper sign up forms were distributed to sporting goods and hardware stores throughout the state. This system was very tedious and difficult to maintain. Now, the agency is able to make changes to the current list of courses immediately as well as provide a substantial amount of additional information about the courses that was not feasible on the paper forms. Students can sign up for courses from any web browser and receive automated email confirmations and reminders when their courses are held. A variety of statistical information is also readily available to help plan future course offerings.

Online Services Applications – All of the online services have been consolidated onto one web page. Virtually all online applications are accessible with one or two mouse clicks. The licensing and lottery applications continue to be huge successes with online sales approaching 40 percent of total sales. Every online transaction benefits the Department by maintaining consistent data in one accessible location, helping to avoid incorrect information being entered and assisting the enforcement division in conducting investigations.

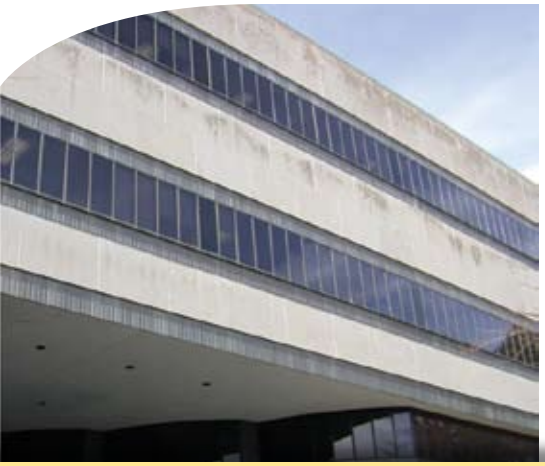
Outdoors Subscriptions – Starting in 2004 customers were offered a chance to purchase a magazine subscription in addition to their license or lottery application purchase. The online sales for magazine subscriptions went from an average of 20 a month to 1,000 a month.

Boat Registrations – Over 18 percent of the 47,000 boat registration renewals were completed over the web. Each online registration is one less that needs to be processed by hand, which speeds up the renewal process and helps avoid keying errors.

State Portal – ITD updated nd.gov, the North Dakota state web portal. From its unveiling in May 2005 through June 2006, nd.gov received 1.7 million hits. It is a user-friendly site that has received accolades from state government and consumers alike. In July 2006, a Brown University study ranked North Dakota as the 13th best state for e-government in the nation. Whether you need a hunting license, information about North Dakota, or are looking for work, this website is all-encompassing of the services state government provides.



Online Grants Program – North Dakota Council on the Arts (NDCA) by June, 30, 2007 will have in place an online grants program by which constituents will have the ability to download and submit all applications to the Council online. This program will save time and money for both constituents and the NDCA.



goal(2)

Meet changing business needs by providing dependable, robust systems

As with most infrastructure, the state's information systems need to be replaced as the underlying technology ages and becomes hard to maintain. These investments reduce the risk of system failures and reduce the support costs going forward. As part of the upgrade, new features and improved efficiencies can be provided by the application. In addition, North Dakota continues to enhance its capability to recover required services in the event a disaster.

Strategies

1. To plan and manage major system replacement projects to ensure system viability.
2. To incorporate disaster recovery and business continuity assessment and mitigation processes as standard practices.
3. To perform required updates to accommodate changing business needs and legislative mandates.

Initiatives

- **Medicaid Management Information System (MMIS) Replacement** – The Department of Human Services (DHS) plans to continue the process to replace its 28 year old MMIS system. This effort will ensure that payments for medical service are processed in a timely and accurate manner.

- **Child Welfare System Front-End Redesign** – The Department of Human Services (DHS) will develop a new "presentation layer" to three systems that are currently used to administer child welfare programs. This single view will allow staff to be more efficient.

- **Time and Labor** – The Information Technology Department (ITD) is considering replacing its current time and labor system with a new enterprise solution.

- **Rewrite Mainframe Software Applications** – The Office of the State Treasurer plans to replace its system from the 1970's with a new user-friendly and easy-to-maintain environment. The new system will improve the efficiency of the office.

- **Bureau of Criminal Investigation (BCI) Case Management** – The Attorney General's Office plans to rewrite the DOS based system into a .NET application which will be easier to support.

- **DNA System Replacement** – The Attorney General's Office will upgrade the software and hardware used to run the DNA process for the crime lab.

- **Unified Court Information System (UCIS) Update/Replacement** – Judicial Branch plans to significantly update or replace the current case management system. This system is nearly 20 years old.

- **High Volume Printer Replacement** – The Xerox DocuTech printing equipment was leased and this lease is expiring. This project will determine the best solution for high-speed printing and copying.

- **Legacy Application System Replacement –** North Dakota Public Employees Retirement System (NDPERS) will replace their legacy application with a purchased system that will efficiently administer benefits for employees and retirees of the state and other participating employer groups.

- **Foundation Aid** – The Department of Public Instruction (DPI) will rewrite the state aid payment system for K-12 schools. The new system will modernize the current payment system allowing for better integration with the Online Recruiting System (ORS) data system, more efficient maintenance, flexible reporting and easier payment management.

- **Education Standards and Practices Board (ESPB) System Migration** – The Department of Public Instruction (DPI) plans to replace four systems related to the Education Standards and Practices Board (ESPB) allowing continued data sharing and reporting when the ESPB system comes off the mainframe.

- **Unempolyment Insurance (UI) Modernization – Reed Act** – Job Service North Dakota (JSND) will start a two biennium process to upgrade its major Unemployment Insurance systems. This upgrade will promote better customer service and staff efficiencies.

- **Migrate Internet Site from Oracle Application Server** – Job Service North Dakota (JSND) plans to migrate its website data to reduce the number of systems they need to manage, thus reducing total cost.

- **Boiler and Anhydrous Ammonia Inspection System** – The Office of the Insurance Commissioner plans to replace its obsolete system with new technology. This replacement will provide faster and more efficient processing of the inspection reports, fees and issuing of certificates.

- **Bond Accounting and Securities Safekeeping System** – The Bank of North Dakota plans to replace its DOS based system to ensure continued support of treasury services and bond accounts for its customers.

- **Claims and Policy Replacement** – Workforce Safety and Insurance (WSI) will replace its Claims Management System (CMS), Policy Information Computer System (PICS) and Workflow Management System (Work Manger) with an up-to-date comprehensive package.

- **Retiree Standalone Prescription Drug Coverage** – North Dakota Public Employee Retirment System (NDPERS) plans to separate the prescription drug coverage selection from the medical coverage, providing retirees improved options in health care planning.

- **Toxicology** – The Attorney General's Office will add functionality to the Crime Lab base system to handle the toxicology requirements.

- **Computer Based Training (CBT)** – The Veterans Home plans to deploy a CBT system to improve its training process for employees.

- **Discharge Papers** – The Department of Veterans Affairs plans to use an Electronic Data Management System (EDMS) to store the thousands of DD214 discharge papers of North Dakota veterans.

- **Emergency Alert System (EAS) Satellite Notification** – The Department of Emergency Services will replace its current system which is problematic and has failed to alert the public at times.

- **National Crime Information Center (NCIC) Validation** – The Department of Emergency Services will deploy an on-line database to ensure validations reported to the National Crime Information Center are complete and meet FBI mandates.

- **Integrate Field Service Operations into ITAG** – The Department of Corrections and Rehabilitation (DOCR) plans to ingrate their field services system into the offender management system (ITAG).

- **National Animal Identification System** – The Department of Agriculture will deploy a tracking system consistent with the United States Department of Agriculture's (USDA) National Animal Identification System (NAIS) to manage animal tracking and disease containment.

- **Enforcement Incident Reporting and Case Management** – The North Dakota Game and Fish Department plans to develop a web-based application to allow wardens to input incidents.

Meet changing business needs by providing dependable, robust systems

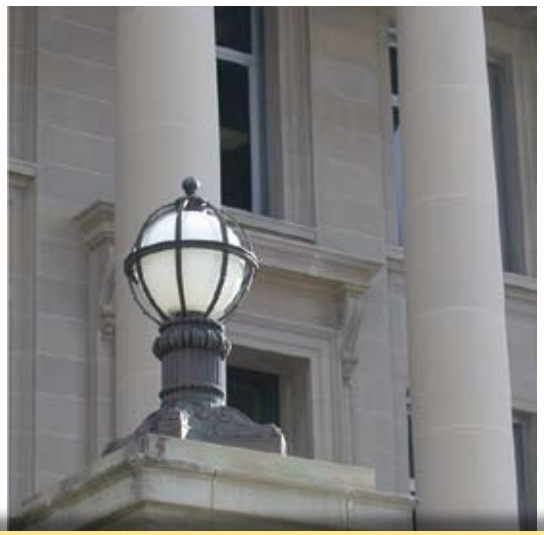
Initiatives Continued

Mainframe Migration – In November 2005, the Information Technology Department (ITD) began a project to migrate all computer applications running on the state's mainframe computer to an Intel based environment. This project is split into four phases and will be completed in May 2008.

The incentives for the project are:

1) The annual cost of operating this platform continues to increase. The estimated annual savings is expected to be $1,900,000 once all the applications are off the mainframe and ITD can remove this environment.
2) All new agency applications are being written to run on platforms other than the mainframe system. The concern is as old applications are being rewritten, the remaining applications will be required to pay for the high costs of operating the mainframe.
3) Existing ITD staff with the skills to run mainframe systems are eligible to retire in the next five years. The next generation of technical professionals is being educated in operating Intel based environments.

Legislative Applications Replacemant – The Legislative Branch plans to replace its legislative applications with a user-friendly editing program, a cost-effective print rendering engine, and desktop office suite software using modern tools, languages and techniques. Replacement of the aging hall monitors, laptop computers, monitor extender systems and video software is also planned.



Accomplishments

Disaster Recovery – Job Service North Dakota (JSND) has leased a backup mainframe and agency has updated the Continuity of Operations Plan.

Employment Case Management – Job Service North Dakota (JSND) has replaced the existing customized Oracle forms case management NDWorks application with a commercial off-the-shelf application from Geographic Solutions Inc.

Labor Market Information – Job Service North Dakota (JSND) replaced the existing labor market information application with a commercial off-the-shelf application from Geographic Solutions Inc.

Workflow Conversion – Job Service North Dakota (JSND) replaced the current Pinnacle workflow application with FileNet BPM (Business Process Manager).

Second Data Center – The Information Technology Department (ITD) established a second data center providing improved disaster recovery. For many platforms, Disaster Recovery (DR) capabilities exist for the first time in the state.

Integrated Tax System – The Tax Department has implemented an integrated tax system, GenTax. While this system should be transparent to taxpayers, they will notice improved customer service from the Tax Department. The project replaced an out-dated, 40-year-old mainframe system, with a new system that provides the framework for the tax department to expand and improve services for all taxpayers, including centralized taxpayer assistance.

Teacher's Fund for Retirement (TFFR) System Upgrade – The North Dakota Retirement Investment Office replaced their mainframe administration package with the CPAS v5 system.

Offender Management System Upgrade – Department of Corrections and Rehabilitation (DOCR) implemented an upgraded version of their Offender Management System.

Core Banking – The Bank of North Dakota replaced its core banking system. The new solution streamlines operations for Bank employees. The added functionality offers new services to the Bank's customers, as well as leveraging technology to improve communications with customers.

Petroleum Tank Release Compensation Fund (PTRCF) system – The North Dakota Insurance Department replaced a DOS based software called NutPlus. The new system is easier to use and has nicer looking reports and the user does not require a second PC to run the old DOS application.

goal(3)

Allow informed decision making by securely collecting and disseminating information

State agencies collect and manage important sources of information on public safety, health care, education and economic development. Much of this information is maintained in "silos" with limited access. To make the data more useful, the state plans to incorporate new tools for linking data across disparate systems. In addition, business intelligence tools will provide analytic and reporting capabilities within a secure environment.

Strategies

1. To establish and expand the use of "hub and spoke" architectures where appropriate for sharing data across organizational boundaries.
2. To build staff competencies and deploy business intelligence tools to provide timely access to accurate information.
3. To identify, plan and implement measures necessary to ensure privacy, confidentiality and security of information and other assets.

Initiatives

- **Geographical Information System (GIS)** – As part of this initiative, additional data will be acquired and the capabilities of the Hub will be expanded to meet increasing customer demand.
- **Criminal Justice Information System (CJIS)** – CJIS is an ongoing initiative to share applications and data with the goal of improving public safety. Proposed projects include providing access to data from the Judicial Branch, State's Attorneys and local law enforcement agencies. These additional interfaces will give criminal justice agencies a more complete picture of a criminal's record.
- **CJIS Interfaces for Prosecution and Disposition** – The Attorney General's Office developed a plan to receive prosecution and disposition information from state's attorneys electronically rather than paper or email copies.
- **Business Intelligence** – An Enterprise Architecture study team recommended the deployment of a standard solution and capability center. This center will provide experts to develop best practices and give agencies a strong foundation on which to build successful business intelligence projects.
- **Client Information Sharing System** – The Department of Human Services (DHS) will deploy a Master Client Index and expose eligibility information through a "hub" infrastructure for all DHS systems.
- **Statewide Longitudinal Data System** – The Department of Public Instruction (DPI) will deploy a system to provide for No Child Left Behind (NCLB), Electronic Data Exchange Network (EDEN) and other federal and state reporting requirements.
- **Automated Reporting** – The Department of Public Instruction (DPI) will enhance their Statewide Automated Reporting System (STARS) system to provide continued compliance with federal and state reporting requirements.
- **Data Warehouse** – Workforce Safety and Insurance (WSI) plans to implement a tool to better organize, analyze, understand and report WSI's business operations and trends.
- **Implement FileNet Records Management** – Job Service North Dakota (JSND) will implement the Records Manager module of FileNet to ensure proper records retention on electronic documents.
- **Project Management Information System (PMIS)** – Several agencies are working together to implement a Project Management Information System. This common toolset will help project managers to more effectively track the status and manage complex projects.

Accomplishments

The North Dakota Geographic Information System (GIS) initiative continues to grow. The GIS Technical Committee (GISTC) has enhanced the GIS Hub by adding data and applications and increasing awareness of the Hub by promoting its use, value and functionality. These efforts continue to pay off as indicated by the usage of the GIS Hub. There is an average of 35 to 40 daily concurrent connections to the GIS Hub database from state agencies. The web applications average over 85,000 hits per month compared to an average of 50,000 hits during the previous report period. April 2006 was a record-setting month for the GIS Hub web applications with over 102,000 hits. Data downloads average over 2,800 per month. There are approximately 180 layers on the GIS Hub. At the end of June 2006 these layers consumed approximately 2,285 gigabytes of storage. New data that have been loaded onto the GIS Hub over the past year include:

High-resolution aerial photography in the Bismarck-Mandan area

High-resolution aerial photography for Cass County and in the Fargo area

Statewide elevation data from the National Geographic Society

Updated data sets include:

Transportation

City boundary

Statewide color aerial photography data

Major accomplishments include:

Release of the GIS Initiative Strategic Plan which identifies the goals and objectives for the GIS Initiative for the current biennium and for the 2007-2009 Biennium

Development of the GIS Professional Services Contract Pool which has a primary benefit of making the procurement of GIS professional services more efficient by leveraging the master contract terms which have already been negotiated with the awarded vendors.

Adding the Land Department and the Public Services Commission as Associate Members to the GISTC. The addition of these two members reflects the expanding use of GIS within state government

Security Audit – The Information Technology Department (ITD) underwent a successful SAS70 audit in fiscal year 2006. This audit is performed on a regular basis by the Office of the State Auditor with special security testing performed by an external security firm to provide assurance to ITD customers and their auditors that ITD has appropriate controls in place and that these controls are operating effectively.

DNA Inquiry – This service allows law enforcement to inquire on whether a DNA sample is on file at the North Dakota Crime Laboratory for a specific individual. The searches are processed by a program written by CJIS and implemented on the National Law Enforcement Telecommunications System (NLETS).

Security Implementation – Job Service North Dakota (JSND) successfully implemented security changes identified in an agency assessment and financial audit.

Criminal Justice Information Sharing (CJIS) Hub Portal Enhancements:

The CJIS hub grew significantly the past year, there are approximately 900 users registered for access to the CJIS Hub.

Over 560,000 transactions occurred for fiscal year ending June 30, 2006.

New enhancements added to the hub include:

- The ability to check offenses on Non-Sufficient Funds (NSF)
- Search capabilities of Central Warrant Information Systems (CWIS)
- Search capabilities of custody and supervision records
- The addition of the Offender Registration Report

goal(4)

Maximize the value of technology by collaborating to provide shared solutions

North Dakota's state agencies, political subdivisions and citizens benefit from a centrally managed network and centrally hosted applications. The key to successful deployment of shared solutions lies in the collaboration efforts of everyone involved. By sharing the cost of these functions, we maximize the value of our investment in technology.

Strategies

1. To manage network services to state government, education and political subdivisions to ensure availability at a reasonable cost.
2. To identify opportunities and implement shared solutions to reduce the total cost of ownership for state agencies and political subdivisions.
3. To improve the management of technology by sharing knowledge and training opportunities.
4. To leverage the state's investment in PeopleSoft financial and human resource software by upgrading to new functionality and expanding its usage.

Initiatives

Computer System Time Synchronization – The Department of Emergency Services will deploy a system to provide time synchronization between all of its data, voice and other systems. Timestamps are an important attribute in records relating to incidents handled by the department.

Project Management Information System (PMIS) – Several agencies of state government will be implementing a Project Management Information System. This enterprise solution will allow for more efficient project management, which has been shown to improve the success of technology projects.

Telephone System Replacement – The Information Technology Department (ITD) is in the process of developing a plan to migrate current phone service to Voice over IP technology. The new technology has the potential to reduce on-network long distance costs, consolidate the infrastructure and increase disaster recovery capability.

Electronic Document Management System Upgrade – Over the past year the Electronic Document Management System (EDMS) infrastructure was migrated to the latest version of FileNet and Teleform, two of the core technologies in our EDMS infrastructure. EDMS continues to be a service in high demand from Information Technology Department (ITD) customers. Accordingly, ITD has increased the focus on meeting and managing customer expectations for this service. The Software Development Division has provided staff to assist in the implementation of EDMS projects.

STAGEnet is receiving a major facelift – It is moving from a two node (Bismarck-Fargo) ATM SONET ring network to a four node (Bismarck - Fargo - Grand Forks - Minot) Resilient Packet Rings (RPR) network using four 1-Gigabit Ethernet connections. This technology significantly increases the bandwidth available across the backbone network, and is scalable to provide for growth through 2013.

Capitol Wireless Upgrade – The Information Technology Department Telecommunications Division has begun a three-phase project to upgrade wireless computer access in the capitol complex. Phase one covering the legislative wing, legislative meeting rooms and the cafeteria will be completed prior to the 2007 legislative session.

State Cell Phone Contract – A Request for Proposal for cell phone service will be issued in the 4th quarter of 2006 to replace the current contract which expires June 30, 2007. The state contract allows North Dakota to leverage combined purchasing power and manage usage.

Help Desk Coordination – A holistic analysis of the people, process and technology associated with help desk functionality in North Dakota state government will be conducted. In conjunction with Enterprise Architecture, the "future state" of enterprise help desk services will be drafted. It will be used to drive the efficient and effective implementation of future Information Technology Service Management initiatives. One such initiative already underway is the Information Technology Department's deployment of FrontRange ITSM; it will provide an enterprise-ready toolset for managing incidents across agencies.

Criminal Justice Information Sharing (CJIS) – CJIS is an ongoing initiative to share applications and data with the goal of improving public safety. Proposed projects include providing access to data from the Judicial Branch, state's attorneys and local law enforcement agencies. These additional interfaces will give criminal justice agencies a more complete picture of a criminal record.

Collaboration Tools – The Information Technology Department (ITD) will establish an enterprise Microsoft SharePoint service that will enable state workers to collaborate internally as well as with the state's business partners. SharePoint Services will be centrally managed by ITD as a billed service.

Additional State Radio Towers – The Department of Emergency Services plans to install six new radio towers to allow 100 percent coverage in the state.

goal (4) *Continued*

Maximize the value of technology by collaborating to provide shared solutions

Accomplishments

State's Attorney Reporting System (STARS) – As part of the Criminal Justice Information Sharing program, a case management system for state's attorneys was implemented. Currently, five agencies are using STARS; Burleigh, Cass, Grand Forks, Ward and Mountrail County. This is a centrally hosted application available statewide so that state's attorney offices can have access to a system for a minimal investment.

Deployment of Compuware – The Information Technology Department (ITD) deployed Compuware, a network and application monitoring tool. The ITD Network Operating Center (NOC) has successfully used the Compuware product to monitor performance and troubleshoot complex problems.

Metro Fiber Projects – Projects were completed in Grand Forks and Minot with Williston in the planning stage. Metro fiber projects connect school districts, universities and large government office locations to STAGEnet aggregation sites at very high speeds via fiber optic cable.

Customer-Centric Service –The Information Technology Department's traditional help desk was transformed into a customer-focused Service Desk: a "Single Point of Contact" for providing advice and rapid restoration of service. Its incident management process was updated to incorporate industry best practices as defined within the IT Infrastructure Library (ITIL). Service level objectives were developed to help manage customer expectations. A new online survey was created to track and improve the overall customer experience. ITD also began offering its professional "Tier One" support to agencies as an affordable alternative to staffing their own help desk.

State Technology Contracts – Statewide contracts have been negotiated for PCs and desktop management software. Over six quarters, the state has saved $2.8 million as a result of these contracts. State "vendor pool" contracts were also awarded for technology and Geological Information System (GIS) professional services to reduce cost and streamline the procurement process

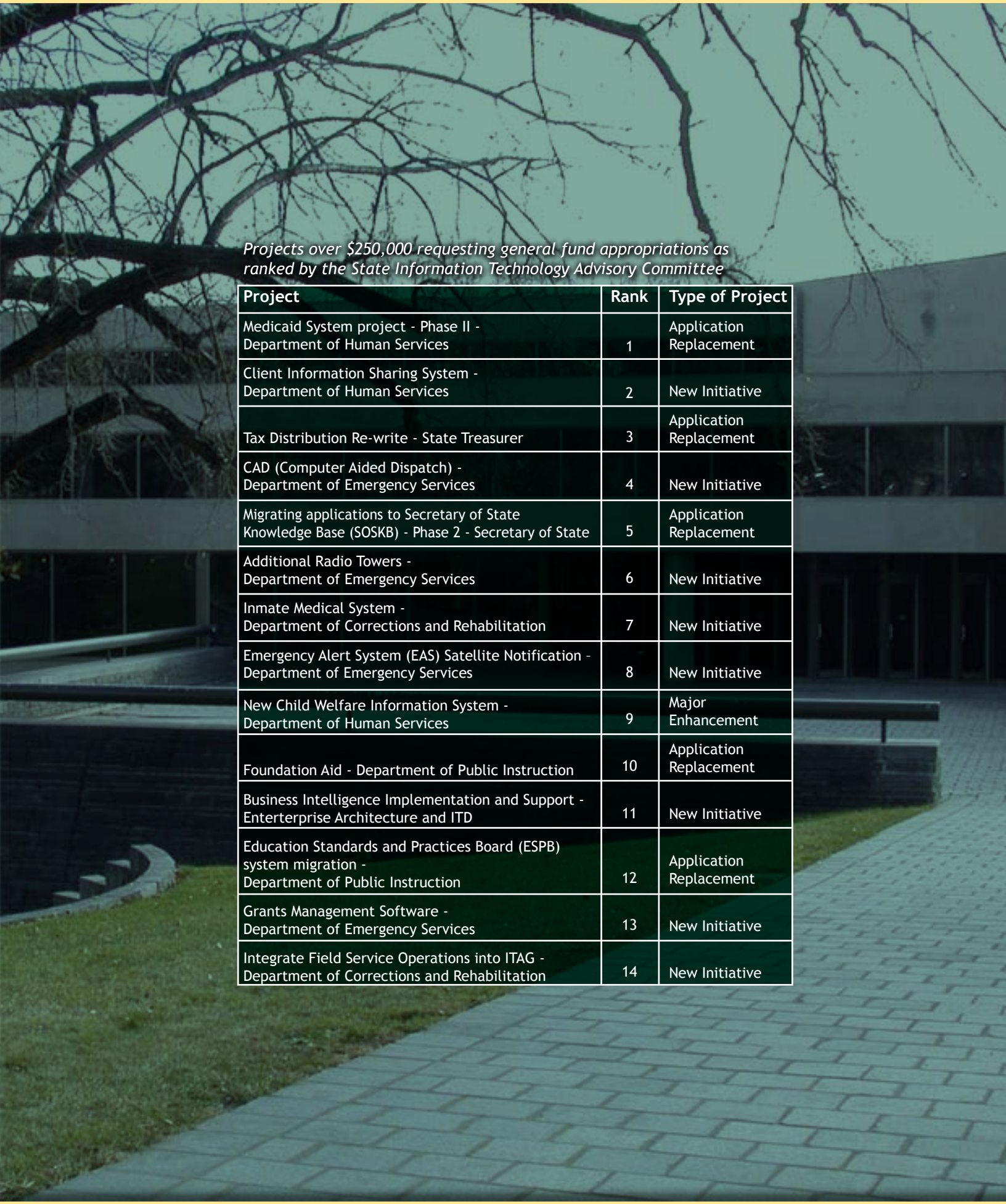
Enterprise Architecture – The Enterprise Architecture processes involved 106 people from 30 agencies. Twelve new or updated technology standards were approved. Study teams were formed to create recommendations regarding desktop search tools, Microsoft SharePoint, time and labor, business intelligence and mobile computing.

Health Alert Network – The Department of Health deployed high-speed secured network connections to local public health facilities providing alert capacity across many different platforms.

Project Mangement – The Enterprise Project Management Office facilitated training and mentoring programs for state agency employees to improve the success of technology projects by increasing the knowledge and skills of project managers.

- Three-day basic training – 111 attended
- Project Management Professional (PMP) certification – 8 project managers
- Project+ certification – 14 project managers
- National Information Technology Apprenticeship System (NITAS) – 24 certifications by 11 project managers

State Radio – North Dakota is entering the final phase of the upgrade of the state radio system to a digital capable system that will allow for increased interoperability between the different emergency service units. Although the system can operate on either a digital or analog signal, for the time being, the system will broadcast in the analog mode. The system will eventually be switched to digital operation as local public safety entities migrate to the newer style radios to comply with the Federal Communications Commission (FCC) mandate to move to narrower bandwith radios. The replacement of the majority of the State Radio System equipment also removes some very old and obsolete infrastructure that was becoming impossible to maintain. By December 2006 the vendors should complete the equipment installation and the project will move into the final acceptance phase.

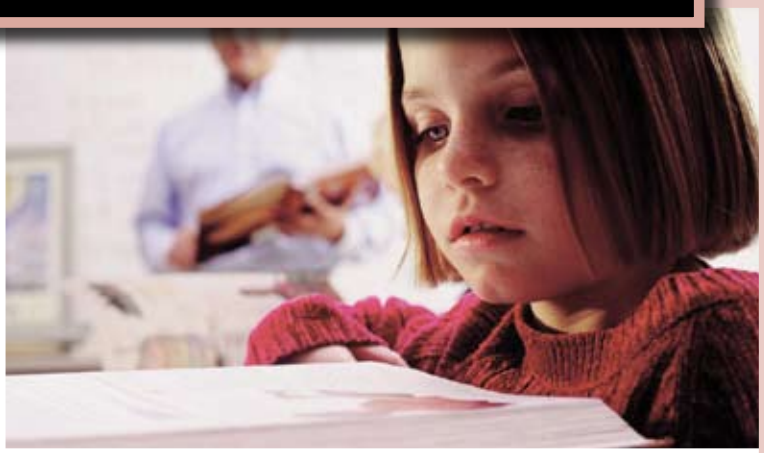


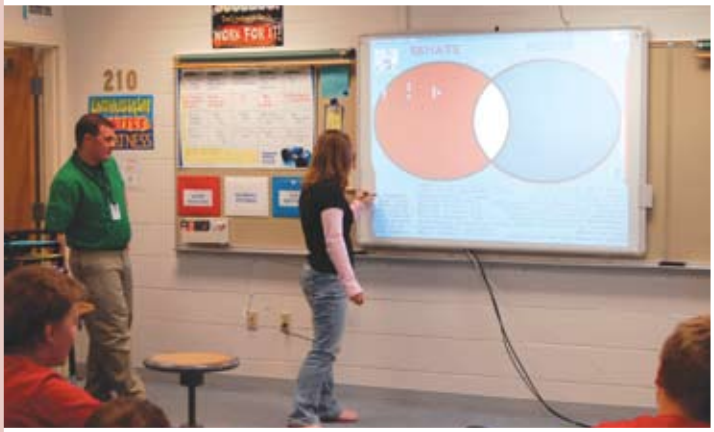
Projects over $250,000 requesting general fund appropriations as ranked by the State Information Technology Advisory Committee

Project	Rank	Type of Project
Medicaid System project - Phase II - Department of Human Services	1	Application Replacement
Client Information Sharing System - Department of Human Services	2	New Initiative
Tax Distribution Re-write - State Treasurer	3	Application Replacement
CAD (Computer Aided Dispatch) - Department of Emergency Services	4	New Initiative
Migrating applications to Secretary of State Knowledge Base (SOSKB) - Phase 2 - Secretary of State	5	Application Replacement
Additional Radio Towers - Department of Emergency Services	6	New Initiative
Inmate Medical System - Department of Corrections and Rehabilitation	7	New Initiative
Emergency Alert System (EAS) Satellite Notification - Department of Emergency Services	8	New Initiative
New Child Welfare Information System - Department of Human Services	9	Major Enhancement
Foundation Aid - Department of Public Instruction	10	Application Replacement
Business Intelligence Implementation and Support - Enterterprise Architecture and ITD	11	New Initiative
Education Standards and Practices Board (ESPB) system migration - Department of Public Instruction	12	Application Replacement
Grants Management Software - Department of Emergency Services	13	New Initiative
Integrate Field Service Operations into ITAG - Department of Corrections and Rehabilitation	14	New Initiative

k-12 education

working together ... moving forward





overview

Dan Pullen
ND Director of K-12 Technology

Since 2001 the North Dakota Educational Technology Council (ND ETC) has worked closely with the Information Technology Department (ITD), the North Dakota University System (NDUS), the Department of Public Instruction and others to accomplish the Council's statutory responsibility: coordinating educational technology initiatives for elementary and secondary education.

The ND ETC Director and the two service agencies of ND ETC, EduTech and the North Dakota Division of Independent Study, work with our state-level partners in order to create efficiencies and avoid duplication of effort. Ongoing collaboration with the North Dakota Council of Educational Leaders and the North Dakota Association of Technology Leaders keeps the work of the ND ETC moving forward but well-grounded in needs identified by K-12 school personnel. But more importantly we work closely with school administrators, school technology coordinators and classroom teachers to make sure that we continue to meet their changing needs and bring the benefits of new technologies to the students in K-12 classrooms across the state.

Collaboration with K-12 leaders and teachers helped us define three new initiatives that we will undertake in the next two years: a statewide buy-down of the cost of United Streaming Video Services in schools, a K-12 data warehouse solution negotiated for North Dakota schools, and a next generation web hosting solution that will provide schools with an easy way to manage their online content.

The members of the ND ETC represent the stakeholder groups that must collaborate and make decisions to ensure that existing and developing technology systems work to the benefit of schools. State government, higher education, school leaders and teachers are all represented on the Council. Their input is critical to ensuring that the technology systems of state government, the Department of Public Instruction, higher education and K-12 are coordinated to maximize efficiency and effectiveness. In the next two years the ND ETC plans to move forward with NDUS and ITD in pilot projects that will test integrated communications systems in state agencies, universities and K-12 schools.

All of the initiatives undertaken by the ND ETC are in line with the Council's "Results Policies," adopted as part of the Policy Governance system that focuses the work of the Council on big-picture goals. The five Results Policies guide the work of the ND ETC Director as well as the work of the Division of Independent Study and EduTech.

The ND Education Technology Council's (ETC) Results Policies state, as a result of our efforts:

1. *North Dakota educational technology systems will continuously improve educational opportunities.*
2. *Technology systems to enhance educational opportunities will be more efficient, effective and coordinated on a statewide basis.*
3. *Distance education systems will be in place to deliver a comprehensive curriculum to North Dakota students.*
4. *Professional development related to the use of technology will be available to meet changing education needs.*
5. *Policies and practices will be maintained to sustain the stability and integrity of the educational technology systems.*

goal(1)

North Dakota educational technology systems will continuously improve educational opportunities

All statewide educational technology initiatives will remain focused on improving the learning opportunities and outcome of students. Robust network connectivity and online planning tools benefit students by enabling teachers and administrators to better track student progress and identify learning difficulties quickly so effective action can be taken toward improvement.

Strategies

1. To make funding available to K-12 schools enabling them to move toward more technology-rich teaching and learning environments.
2. To continue the growth in K-12 learning opportunities using Internet2 capabilities in cooperation with North Dakota University System (NDUS).
3. To expand the implementation of PowerSchool in school districts and improve the training and helpdesk support for schools using PowerSchool.
4. To develop and expand affordable curriculum offerings to the students of North Dakota through the Division of Independent Study.
5. To continue the development and implementation of North Dakota Studies materials in both print and online formats.

Initiatives

- **ND ETC** will request $349,000 in its 2007-09 budget to provide more schools with opportunities to receive Classroom Transformation Grants.

- **EduTech will bring** a total of 90 schools onto PowerSchool by June 2009.

- **EduTech will offer** next generation web hosting services to schools. EduTech CollaborationWeb will allow web content to be added by administrators, teachers, staff and students without requiring knowledge of Hyper Text Markup Language (HTML) or other authoring technologies. Safeguards are included to protect the integrity of the school website.

- **Internet2 educational activities** will be facilitated for K-12 schools.

- **The Division of Independent Study** will continue to expand course options by working collaboratively with other educational entities.

Accomplishments

● **ND ETC awarded "Classroom Transformation Grants"** to 27 schools in North Dakota to implement new classroom technologies ranging from one-to-one computing to specialized science equipment to interactive white boards. Over 60 applications for funds were received.

● **ND ETC awarded grants** to five North Dakota high schools for new video classrooms. The grants were available only to those public high school buildings that did not have video classroom capability.

● **ND ETC conducted** an educational technology needs assessment survey in all schools; the results were used for budget and program planning.

● **ND ETC developed and submitted an application** for grant funding to the Qwest Foundation. North Dakota was awarded $25,000 to fund grants to teachers for new classroom technology for curriculum enhancement.

● **ND ETC and EduTech developed** a new online technology planning tool to facilitate school planning and the approval process for technology plans.

● **EduTech collaborated with Interactive Video Network (IVN) and Information Technology Department (ITD)** to introduce out-of-state videoconferencing activities to teachers and students in North Dakota:

- Read Across America 2005 and 2006.
- Megaconference Jr. – annual world-wide event.

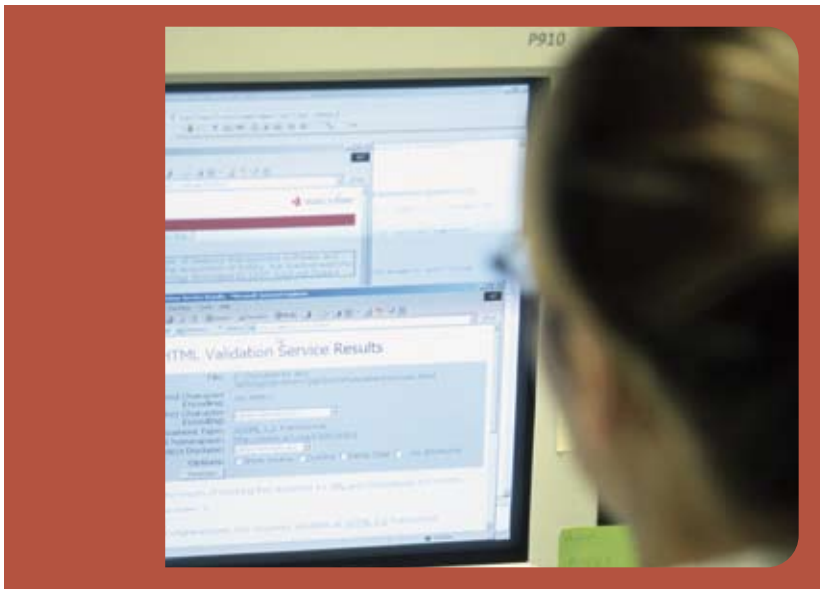
● **EduTech collaborated with in-state providers** to offer educational content via video conference to schools. Partners included the North Dakota Forest Service, Fort Mandan Foundation, North Dakota Council on the Arts, and the State Historical Society.

● **EduTech collaborated with NDUS** institutions to share curriculum content and resources with K-12 schools through specialized video conference sessions, including:

- Individual music lessons
- Role-based historical simulations
- Learning Online Network with computer assisted personalized approach providing math and science curriculum materials to K-12 high school teachers
- Plant science collaboration between university researchers and K-12 students to collect data and conduct tests on local crop plantings
- Electron microscope operated by North Dakota high school students via the internet, studying plant pathology

● **EduTech and ITD implemented the PowerSchool** student information system in 80 schools that include 50% of all students statewide. A statewide PowerSchool Users Group meets biannually. EduTech help desk upgraded its problem-solving software to better meet PowerSchool user needs. Other support includes a template archive and ongoing user blog.

● **EduTech coordinated training sessions** on two types of interactive whiteboards to provide schools with the information to make sound purchasing decisions. Technical and instructional training was also made available for teachers.



● **EduTech cooperated with Rubicon Corporation** to assist schools in successfully implementing Atlas curriculum mapping software.

● **The Division of Independent Study continued** implementing its plan to become self-supporting, requiring no general fund appropriation by 2010. Results of that plan are reflected in an 18 percent reduction in Division of Independent Study's general fund budget request from the 2007 legislature.

● **The Division of Independent Study added** Advanced Placement and ACT/SAT preparation courses to its curriculum and delivered Spanish and Art courses to rural North Dakota schools via video conference.

goal(2)

Technology systems to enhance educational opportunities will be more efficient, effective and coordinated on a statewide basis

In order to maximize local, state and federal investments in school technology systems, statewide coordination and state level leadership are required. Purchasing key applications and infrastructure at the state level creates efficiencies statewide.

Strategies

1. To create efficiencies in K-12 technology spending through aggregating purchases and statewide initiatives.
2. To work collaboratively with state agencies, North Dakota University System (NDUS) and school districts to implement new communication systems.
3. To promote a mainstream vision of distance education to K-12 stakeholders.
4. To develop partnerships with the K-12 Educational Cooperatives in the state and with other educational or technology based institutions to create efficiencies in school use of major technology systems.

Initiatives

- **Collaborative planning by ND ETC, North Dakota Interactive Video Network (IVN), North Dakota Information Technology Department (ITD) and EduTech** will result in an application for E-Rate reimbursement for the video codecs that schools use to connect their video classrooms with other schools for course-sharing.

- **ND ETC will request $390,000** in its 2007-09 budget to support school purchases of United Streaming Video Service on a statewide basis.

- **ND ETC will request $195,000** in its 2007-09 budget to fund collaborative communication systems in three consortiums in the state. This initiative will be implemented in collaboration with NDUS and ITD for the purpose of identifying a common collaborative communication system that can serve K-12, state agencies and post-secondary education.

- **ND ETC will collaborate with ITD**, EduTech and K-12 schools to implement data warehouses for better analysis of school data and improved student achievement.

- **ND ETC, EduTech, the Department of Public Instruction (DPI) and the Association of Technology Leaders** will work cooperatively to identify a replacement for the Professional Competency Continuum (PCC), currently used for technology skill assessment.

- **EduTech and North Dakota University System (NDUS) will cooperate** to upgrade their identity management system, allowing users to access a variety of technology services with a single sign-in.

- **EduTech will license** Technology Solutions that Work to assist schools in making effective technology purchases.

- **The Division of Independent Study** will collaborate with EduTech to implement a new course management system for online course delivery.

Accomplishments

- **ND ETC led the development** and approval of the 2006-2009 state educational technology plan. *http://www.ndetc.k12.nd.us/pdf/2006StateTechPlanApril25version.pdf*

- **ND ETC led a statewide E-rate team** made up of representatives of ND ETC, ITD, EduTech, DPI, the State Library, and North Dakota schools to oversee the preparation of the annual E-rate application for over $2.3 million in federal funds to pay for K-12 network connectivity.

- **ND ETC negotiated a buy-down plan** for United Steaming Video Service in K-12 schools.

- **ND ETC hired a new director** for the Division of Independent Study.

- **ND ETC engaged in ongoing planning** with ITD, IVN and EduTech related to reorganization of video services in the state and planning for the "next generation" of integrated video and communication services.

- **ND ETC led the Procurement** and contract negotiation processes resulting in a statewide master agreement for a K-12 data warehouse. Schools are currently in the implementation process.

- **ND ETC participated on the Department of Public Instruction Data Collection Advisory Committee** to provide input into the development of DPI's new Statewide Automated Reporting System (STARS) data reporting system.

- **ND ETC and EduTech offered training workshops** and phone and e-mail support for schools completing their annual E-rate applications.

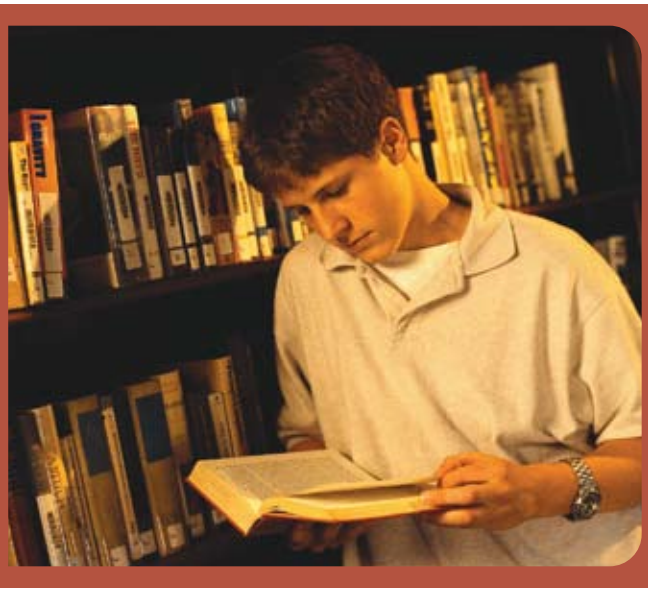
- **ND ETC and the Department of Public Instruction jointly funded** the Professional Competency Continuum statewide as a tool for all educators to use in assessing teaching and learning practices in North Dakota schools and for providing data needed for planning professional development.

- **EduTech worked with the Information Technology Department** to negotiate a new PowerSchool contract for the next five years.

- **EduTech worked with DPI** on assessing the effectiveness of school technology initiatives funded by competitive Title II-D funds administered by DPI.

- **EduTech maintained** nine regional information technology specialists across the state to serve school needs for technology consultation and training.

- **EduTech provided Technology Solutions that Work**, an online database service, giving schools factual, current information on strategies and tools that are successfully meeting the directives of No Child Left Behind (NCLB) in the areas of reading and math.



- **EduTech provided consulting services** to schools related to purchasing new video equipment and upgrading existing equipment. Specific support was available to those applying for ND ETC grants.

- **EduTech offered BlackBoard**, a learning management system, to all K-12 schools with an emphasis on Interactive Television (ITV) schools to increase their communication with students in remote video sites.

goal(3)

Distance education systems will be in place to deliver a comprehensive curriculum to North Dakota students

Distance learning is becoming increasingly important for providing North Dakota students with a comprehensive curriculum, including specialized high school, advanced placement and dual credit courses. The use of video and web-based delivery is on the rise in K-12 schools. The courses available through the Division of Independent Study are an increasingly important state asset.

Strategies

1. To support the implementation of video networking in schools that need video to share courses.
2. To implement video networking capabilities and strategies to connect K-12 schools to educational resources outside the state.
3. To expand the Division of Independent Study's traditional curriculum to keep pace with technological innovations in distance education.

Initiatives

- **The Division of Independent Study will continue to improve** its distance education curriculum to ensure that its students are well prepared for work or further study.

- **The Division of Independent Study will request general funds** in its 2007-09 budget to develop online resources for fourth and eighth grade North Dakota Studies.

- **The Division of Independent Study will systematically provide current information** to K-12 school administrators regarding distance educations options available to K-12 students through print, web and face-to-face contacts.

Accomplishments

- **The ND ETC awarded $441,000** in grants to 27 schools to build new video classrooms or to add H.323 capabilities to their distance learning systems.

- **Over 2,600 North Dakota high school students attended a class** on video during fall semester 2005.

- **Courses were shared by consortiums of schools** using video included core and elective offerings, 25 percent of which were for dual credit.

- **EduTech and Interactive Video Network (IVN) supported** an Interactive Television (ITV) consortium leaders group that meets quarterly to work on statewide video issues.

- **EduTech provided consultation** to schools related to purchasing new video equipment or upgrading existing equipment. Specialized support was available to those applying for ND ETC grants.

- **EduTech offered BlackBoard**, a learning management software, to all K-12 schools with an emphasis on ITV schools to increase their communication with students in distant video sites.

- **The Division of Independent Study offered courses** by video to students in North Dakota schools in addition to serving students through print and web-based distance education.

- **During the 2005-06 school year** over 1,500 North Dakota high school students took a course through the North Dakota Division of Independent Study either online or through print and web-based delivery.

- **The Division of Independent Study created** an assessment team to monitor, review and develop policies for online assessments.

- **The Division of Independent Study developed** an advanced shopping cart approach to serving customers purchasing K-12 distance education courses and curriculum materials.

- **The Division of Independent Study implemented** a web-based program that allows schools to monitor the progress of students taking distance education courses.

goal(4)

Professional development related to the use of technology will be available to meet changing education needs

Without adequate professional development for teachers and administrators the technology systems in place cannot effectively serve student needs. Developing, coordinating and offering professional development at the state level is both cost-effective and provides consistency across all districts without regard to size or location.

Strategies

1. To continue providing online training for K-12 educators, students and their parents through a statewide contract for Atomic Learning.
2. To implement the use of interactive video networking and web delivery for new professional development opportunities for K-12 educators.
3. To make training available to K-12 leaders related to using student and school data in educational improvement and achieving the goals of the No Child Left Behind act.

Initiatives

- **The ND ETC will request $221,000** in its 2007-09 budget for continuation of statewide access to Atomic Learning, online technology training for educators, students and parents.

- **The ND ETC and EduTech will develop** professional development models that meet the needs of the state Educational Cooperatives Joint Powers Agreements (JPAs).

- **EduTech will will expand current** professional development, including video initiatives for delivering training for distance educators, technology skills and integration training, and other academic and administrative systems.

- **EduTech professional development will be targeted** to better meet educator and school needs for time, location and content.

- **EduTech will develop and support new** training related to internet safety.

- **EduTech will develop and support new** professional development and training for distance education teachers who teach using video or web-based technologies. The goal is to improve the quality of instruction and the achievement of students.

- **EduTech will create and deliver new** professional development opportunities to help schools make better use of data systems to improve student achievement.

Accomplishments

- **Atomic Learning online** professional development resources were piloted in 42 North Dakota schools in 2005-06 and made available to all schools in 2006-07 through a negotiated statewide contract. Atomic Learning is an online training service that provides short video lessons on hundreds of applications.

- **Fifteen professional development offerings** delivered via video were made available to K-12 teachers by EduTech.

- **Four professional development offerings** for school technology coordinators were delivered by video each year. Two additional face-to-face offerings were made available each year. Federal funding through a cooperative arrangement between North Dakota Department of Public Instruction and EduTech supported these activities.

- **The annual TnT Conference** (Teaching and Technology) was held in 2005 and 2006. Over 350 educators attended each year.

- **EduTech offered advanced PowerSchool training** to educators in districts using the PowerSchool student information system.

- **EduTech offered on-going** technical and instructional training for video instructors at an annual videoconferencing institute to increase educator capacity in videoconferencing hardware, software and network skills and curriculum integration of videoconference resources.

- **Participation by teachers in EduTech** professional development workshops continued to increase with over 5,000 participants in the 2005-06 school year. Over 350 of those participants received graduate credit.

- **EduTech and Bismarck Public Schools cooperated** to provide the first annual North Dakota Assessment Conference focusing on assisting teachers, administrators and specialists with assessment data and strategies to make effective use of the data.

- **EduTech coordinated** face-to-face and online delivery of internet safety programs for school administrators and teachers.

- **EduTech developed INSTEP** (INStructional TEchnology Partnerships) to assist classroom teachers in the implementation and integration of technology into the classroom by pairing EduTech staff and teachers together to plan, develop and deliver lessons.

- **Professional development** related to using Atomic Learning was offered by EduTech to over 150 K-12 educators in 2005-06.

- **EduTech offered three advanced** Microsoft server trainings to school technology coordinators.

goal(5)

Policies and practices will be maintained to sustain the stability and integrity of the educational technology systems

As technology systems become mission-critical in schools, their use cannot be interrupted for long by network outages or local system failures before courses are negatively affected and school business practices are threatened. State level security and support systems provide an effective and cost-effective way for schools to use high performance systems on a daily basis with a high degree of confidence and success.

Strategies

1. To Implement statewide virus protection in every K-12 school connected to STAGEnet to ensure the stability of the shared infrastructure.
2. To maintain statewide internet filtering for all K-12 schools.

Initiatives

- **EduTech will provide** school administrators and technology coordinators with the resources and skills needed to manage their technology risks.
- **EduTech will continue** to seek solutions to minimize the time technology coordinators spend on system security.
- **EduTech will work** with the Information Technology Department (ITD) and the STAGEnet Technical Committee to develop Information Technology Security Guidelines Standards for K-12 schools.
- **EduTech will provide ongoing support** for existing network security systems.
- **EduTech will seek an increase of $15,000** for the 2007-09 biennium to maintain and enhance statewide virus protection for K-12 schools.
- **EduTech will seek an increase of $55,000** for the 2007-09 biennium to maintain the K-12 internet filtering system for Children's Internet Protection Act (CIPA) compliance.
- **Internet safety** and network and data security issues will be emphasized in ongoing communication and professional development for K-12 personnel.

Accomplishments

- **EduTech managed a statewide K-12 virus protection system** for all K-12 computers connected to STAGEnet, which kept the network relatively virus-free in the past year. The cost-savings of the centrally purchased and managed anti-virus system were 60 percent statewide.

- **EduTech blocked over 600,000 viruses** per year in the 45,000 email accounts it maintains for K-12 teachers and students. In addition, EduTech blocked over 45 million SPAM messages per year.

- **EduTech managed a statewide internet filtering system** that provides a safe internet environment for students in the state. Filtering, required by the Federal Children's Internet Protection Act, is flexible and allows each school district to determine the level of filtering it wants. The cost savings of the centrally purchased and managed filtering systems is 75 percent.

- **EduTech developed** and distributed Information Technology Security Guidelines for K-12 schools.

- **EduTech help-desk personnel provided** ongoing technology troubleshooting and consultation to schools across the state.

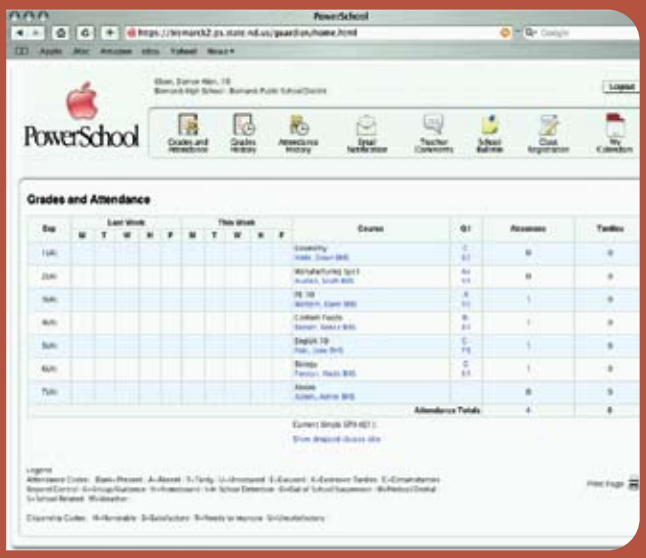
- **EduTech worked cooperatively** with North Dakota University System to offer a conference specifically dealing with network security.

- **EduTech distributed** an integrated, managed desktop security solution to protect North Dakota K-12 school computers. Including a firewall, antivirus protection and intrusion detection and prevention system, the software safeguards school technology resources and information systems. All features are configured and managed by EduTech, freeing up valuable school staff time.

- **EduTech maintained a security blog** on their website to assist schools with day to day security support.

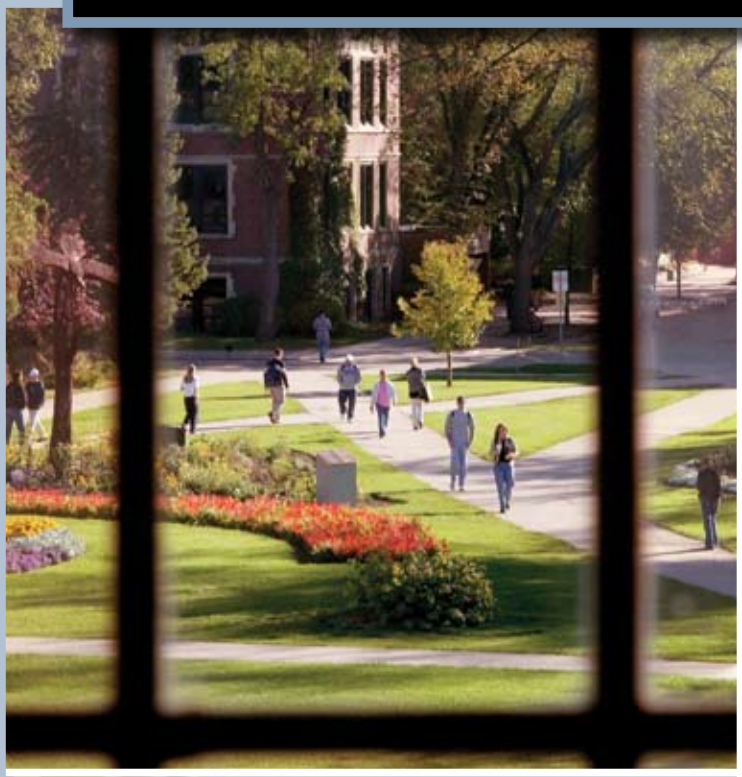
- **The ND ETC, Division of Independent Study (DIS) and EduTech maintained** websites for their clients that met accessibilty standards.

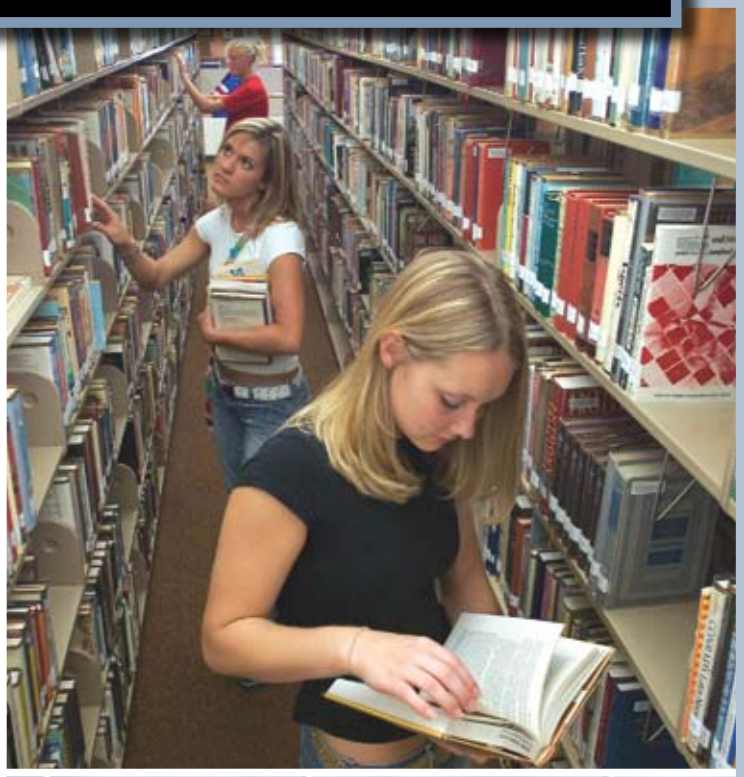
- **Division of Independent Study** implemented a global monitoring system to ensure that its online courses are continuously available to students around the world on a 24/7 basis.



university system

working together ... moving forward





overview

Randall Thursby,
NDUS Interim CIO

The title, "Working Together – Moving Forward" states how we as state government, K-12, and the North Dakota University System (NDUS) have operated for many years. Implementation of the Enterprise Resource Planning system "ConnectND" is a prime example of how working together demonstrates the value of collaborative efforts.

While ConnectND's implementation did include some challenges, and there are still problems to be resolved, working together we have implemented the core to keep the business of not only the North Dakota University System but all of state government operational. It was with the dedication of staff within the project and across the campuses that the core functionality of ConnectND was implemented. All involved should be commended for the efforts and sacrifices made throughout the implementation of ConnectND. Without their efforts and sacrifices, the project would not have reached this operational level. Thank you.

It is now time for us to move forward. Forward with fixing those items that still need attention and adding new enhancements and functionality to improve business processes across the NDUS. This process is underway with upgrades to the Human Resource Management System (HRMS) system and soon to include upgrades to the Financial and Student Administration system. Moving forward will include a continued upgrading of the system that will include vendor implemented fixes to those things that do not function as well as they should and including new functionality that has been requested by customers as new "best practices" in conducting business.

The Online Dakota Information Network (ODIN) library system uses the ALEPH 500 library system by ExLibris. ODIN is assessing adding software called SFX and Metalib to the ALEPH 500 software to provide library users seamless linking to their library's electronic materials. These two packages work together to enhance the ALEPH 500 online catalog. Using SFX, the library is able to efficiently track electronic subscriptions and simplify access to those materials for the library's users. The Metalib software will allow library users to search multiple types of databases; the local online catalog, online catalogs of other libraries, magazine and journal indexes, e-books, for example, in one search.

The Interactive Video Network (IVN) continues to grow in use and in providing services that constituents need. Constituents include not only the NDUS but also state government entities, K-12, and others associated with education. Videoconferencing as a form of communications is becoming more common place. While IVN did add an additional 100 sites to the IVN network, (bringing the total to 425 sites on the network) the direction in the industry is to make videoconferencing as ubiquitous as the telephone. Moving forward, IVN is working on capabilities to allow individuals to schedule their own multipoint videoconferences using the IVN bridging system and also to allow pre-scheduling a conference and allowing attendees to call into the bridge and connect to their videoconference. This is called meet-me videoconferencing.

The NDUS Help Desk continues to grow in supporting the needs of NDUS users. ConnectND system users are the bulk of the calls handled and the vast majority are resolved with this initial call. Users are instructed that they are to call the NDUS help desk when they are experiencing problems so that the troubles can be managed and tracked in the help desk software. Moving forward, the help desk is working with the state in the feasibility of a new help desk software.

The North Dakota University System Online continues to grow in the number of students using this service. Currently, there are more than 800 courses available online from the campuses of the North Dakota University System. Moving forward, online courses will continue to grow as students not only use these to supplement in-classroom courses, but also to take some programs completely online.

goal(1)

To improve North Dakota University System information technology-enabled business processes and services

This goal is the core that supports business processes of the institutions and the University System. We strive to deliver the most effective technology within available resources.

Strategies

1. To work with state government in stabilizing critical core ConnectND functions, and implement upgrades and enhancements to the new financial/student/human resources management system known as ConnectND.
2. To evaluate proceeding with phase two of enhancing the Online Dakota Information Network's (ODIN) library services with implementation of MetaLib/SFX.
3. To implement phase one of a converged environment that supports voice, data, and video and is referred to as IP Multimedia.
4. To implement an enterprise project management office including enterprise architecture.
5. To introduce Interactive Video Network (IVN) services and initiatives designed to expand user options while enhancing videoconferencing capabilities.
6. To use the enhanced communications capabilities made available by the upgrade to STAGEnet to improve services to students, faculty, staff and the citizens of the state.

Initiatives

■ **With the core functionality of ConnectND** implemented across the North Dakota University System (NDUS), it is time to consider new functionality that will enhance the business processes of the institutions. Additionally, upgrades will be a continuing process which will be performed to maintain ConnectND at the highest level of capability using the most up-to-date vendor implemented "best practices" and technology. Keeping current with vendor upgrades while adding new functionality will be a significant challenge.

■ **While the Online Dakota Information Network (ODIN) library system** has implemented their new library management system, the next step is to enhance services with implementation of MetaLib/SFX.

■ **Implementation of a Converged Environment** also known as IP Multimedia. Phase One implementation of IP Multimedia would include some or all of the following: deployment of a test bed to determine future system implementation in Phase Two; implementation of Voice over the Internet Protocol (VoIP) which uses the IT data network for transporting telephone conversations instead of the current practice of a dedicated telephone circuit; and evaluate a migration to Session Initiated Protocol (SIP) which is an application layer control protocol or the "glue" that allows voice, data, and video to be used in the same call on an IP connection.

■ **Implement an Enterprise Project Management Office** to include Enterprise Architecture.

■ **Implement Interactive Video Network (IVN) capabilities** to allow for self scheduling of videoconferences and also the capability for meet-me videoconferencing scheduling and expanded support for desktop video.

Accomplishments

■ **Working with the state, ConnectND** has been implemented at all eleven NDUS institutions and all state agencies in North Dakota. This system is comprised of Human Resources, Financial, and Student Administrative applications. A data center located in Bismarck and operated by the Information Technology Department (ITD) hosts the Human Resource Management System (HRMS) and Financial portion of the system, and a Higher Education Computing Network (HECN) data center in Grand Forks located at the University of North Dakota hosts the Student Administrative portion of the system.

■ **As part of ConnectND**, several ancillary systems that were part of the legacy system in higher education were also implemented. These included a Facilities, a Housing, a Parking, and a Room scheduling management system and all are hosted at the Grand Forks Data Center. All NDUS institutions use some or all of these ancillary systems.

■ **Online Dakota Information Network (ODIN) libraries have partnered** with other North Dakota public and school libraries to make available thousands of magazine and journal titles to North Dakota citizens.

■ **Materials from Online Dakota Information Network (ODIN) libraries**, and libraries world wide, are available to North Dakota citizens through their local library or through the state library.

■ **Online Dakota Information Network (ODIN) libraries share** central site hardware and software reducing costs.

■ **Large library capabilities** and potential are provided for all Online Dakota Information Network (ODIN) libraries because it is a shared system.

■ **The Interactive Video Network (IVN)** continues to grow. During the past 24 months an additional 100 sites were added to the system and as of June 30, 2006, there were 425 sites on the network. The NDUS continues to take advantage of the extended outreach capabilities of IVN and almost 60% of the 2006 Spring Semester IVN classes were delivered to non-campus locations.

■ **IVN supported more than 28,000 hours** of higher education and K-12 academic instruction from September 05-May of 2006. During this period, nearly 4,000 NDUS students were enrolled in more than 20 degree programs and 281 classes that were delivered via the network.

■ **UND economics professor Patrick O'Neill and NDSU history professor Dr. Thomas Isern** extended the reach of videoconferencing to global dimensions. O'Neill reached half way across the globe to teach an economics course to 85 students in Shanghai, China, while Isern, studying in New Zealand, used videoconferencing to reach back to his on-campus students at NDSU.

■ **Education and technical entities** within K-12 and higher education are collaborating to develop and build support for advanced Internet2 (I2) applications in the K-20 arena. Some examples include: computer science and role based simulations; physics and student access to computer assisted chemistry, physics and math homework problems; plant pathology and K-12 student interactions with NDUS researchers on data collection and plant testing; and plant pathology and the operation of an electron microscope by high school students.

■ **Seventy-nine miles separate the campuses** of Minot State University (MSU) and Minot State University - Bottineau (MSU-B), but IVN is the focal point that allows the two schools to build on each other's strengths. MSU-B is delivering six associate degree programs over IVN to students at MSU campus. Minot State's payback for hosting Bottineau's students occurs at graduation time; many of the associate degree earners take a liking to Minot's four-year campus and stay on, in pursuit of a bachelor's degree.

■ **Videoconference equipment** has become as important as a "beaker and test tubes" in science labs at the state's five tribal colleges. In a collaborative effort with the North Dakota University System, IVN is providing tribal college students with an expanded range of science expertise, practice, and knowledge. The goal of this broadened learning community is the increase in student "hunger" in science and biomedical research.

■ **IVN in cooperation with EduTech**, coordinated a number of K-12 videoconference enrichment programs for the state's K-12 community. Program offerings included Read Across America, Read Across North Dakota, Foreign Language Across North Dakota, and Megaconference Jr. program. In addition, IVN and EduTech worked to expand enrichment program offerings within the state, at locations like the North Dakota Forest Service, Fort Mandan Foundation, North Dakota Council on the Arts, and the State Historical Society of North Dakota.

■ **The use of Internet2** for delivering and providing content, applications, and advanced networking continues to grow. In North Dakota, Internet2 is used to support classes, research activities, and collaborative K-20 projects. In 2005-06, examples include: a two-semester Arabic class taught by a professor in California and delivered to NDSU students via Montana; The Advanced Transportation Weather Information Center – the Army High Performance Computing (HPC) Research Center uses current Internet2 bandwidth to transfer and access large amounts of data for modeling research and for high-performance computing for global and regional weather; and at NDSU, the Center for Nanoscale Science and Engineering (CNSE) engages in pioneering, interdisciplinary research and technology development on materials whose functional design starts at the atomic-molecular scale.

goal(2)

To support North Dakota University System infrastructure needs

This goal is the foundation for Information Technology (IT) in support of North Dakota University System (NDUS) business processes. Infrastructure holds information technology systems together and allows systems to communicate with each other over a network such as STAGEnet. It includes such things as security and access control which is called "middleware." In addition, policies, procedures, and guidelines must be developed and updated as needed. The process that provides or is a blueprint for establishing information technology policies, procedures, and guidelines to promote effective use of information technology is called Enterprise Architecture. Also of critical importance to research and economic development is North Dakota's involvement in the national research network known as Lambdarail through the Northern Tier Project.

Strategies

1. To offer reliable, cost-effective and appropriate North Dakota University System network services.
2. To provide middleware tools and data to help people more easily use networked resources and services with security and privacy.
3. To prepare the IP infrastructure for IP Multimedia which will be the convergence of voice, data, and video along with other collaboration tools on a single network.
4. To enable libraries to provide easy access to licensed electronic information.
5. To provide IT enterprise architecture and project management leadership.
6. To provide linkage through STAGEnet and the Northern Tier Network to national and international research and development networks.

Initiatives

■ **Future network requirements will include** services that are capable of not only combining voice, data, and video over STAGEnet, it must also be capable of supporting collaborative tools used in a converged setting. It is important that we have the infrastructure in place that is capable of supporting such things as Simple Internet Protocol (SIP), Voice over Internet Protocol (VoIP), and Internet Protocol Multimedia.

■ **Enable libraries** to provide easy access to licensed electronic information.

■ **Provide the leadership to the North Dakota University System (NDUS)** in IT project management and enterprise architecture.

■ **Seek funding both at the state and federal level** to enable access to the national high speed research network.

■ **Northern Tier Network** – North Dakota State University (NDSU), the University of North Dakota (UND), the state's Information Technology Department and Turtle Mountain Community College are members of a consortium made up of similar organizations within nine-states located along the Canadian border between Chicago and Seattle. Members of this Northern Tier Network Consortium formed in 2003, are in the process of acquiring funds and installing fiber-based networks in the Northern Tier region as part of the nation's build-out of research and development broadband networks. This will provide our state's research and education universities along with its private and public sector partners, access to national and international data intensive resources resulting in enhanced educational experiences and the development of new products and services.

Accomplishments

■ **North Dakota University System (NDUS) quadrupled Internet1 bandwidth** and doubled Internet2 bandwidth allowing excellent access to academic resources and research data for those coming into NDUS campuses and for members of the NDUS community going outside of STAGEnet. STAGEnet access was quadrupled (to 45 Megabit per second) for nine campuses; while North Dakota State University (NDSU) access remained at 1 Gigabit per second, University of North Dakota (UND) access increased to 155 Megabit per second (UND will be increased to 1 Gigabit when STAGEnet completes an upgrade expected in November). STAGEnet access improvements allow better access among campuses for services such as Interactive Video Network (IVN), Online Dakota Information Network (ODIN) and ConnectND and is the first step for campus access to Internet1 and Internet2.

■ **Online Dakota Information Network (ODIN) retired the PALS library system** in the fall of 2005.

■ **The new ODIN library system** allows seamless interaction with other library systems in the (Minnesota and South Dakota) region to borrow and lend material. ODIN staff now can send and receive requests to borrow or lend materials between multiple library systems. This is all managed from "their" location within the ODIN system and this capability can be expanded to other library systems.

■ **The NDUS, Higher Education Computing Network (HECN)** legacy system used for financial and student administrative purposes was discontinued in the fall of 2005 when it was replaced by the ConnectND system. This included systems used by Facilities, Housing, and Parking for management of their operations, and room scheduling capabilities for classroom courses and events. In some cases the legacy system was limited in capabilities; however, these functions needed to be carried over into new software systems when the legacy system was discontinued.

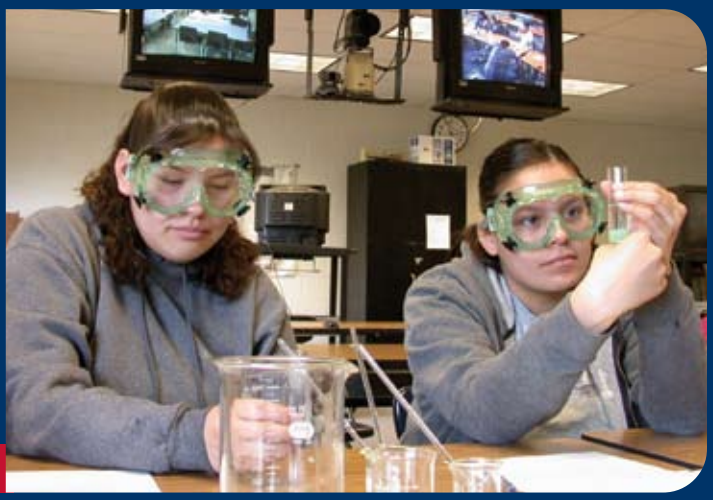
■ **In March 2006,** a Voice over the Internet Protocol (VoIP) information and planning session was held at NDSU for all NDUS institutions interested. The purpose was to update campuses on the capabilities of the existing Avaya systems as it relates to VoIP, have an update on the state's VoIP strategy and planned rollout, discuss how the University of Oklahoma implemented VoIP on a data platform, and bring campus administrators information on how campuses will be impacted. Now we need to prepare for a change to a VoIP system.

■ **Working with the state's Enterprise Project Management Office**, NDUS' Enterprise Project Management Advisory Group representative has been involved with the development of the North Dakota Project Management Guidebook and other project management issues including reporting on NDUS IT Large Projects, preparation of white papers related to project management; preparation of other policies, procedures and guidelines; and providing guidance on project management job descriptions for the state.

■ **The State's Northern Tier (NT) Network** NDUS project leaders engaged two consultants in 2005-2006 to develop a network engineering plan and an associated business plan to justify funding requests. NDUS NT leaders were informed by Senator Dorgan's office in October 2006 that the U.S. Department of Defense (DoD) would be providing $3.25 million to begin implementation of the network in North Dakota. This effort will be coordinated with the Northern Tier Network build-out taking place in surrounding states.

goal(3)

To improve or enhance North Dakota University System collaborative efforts



Working together with the state, K-12, and other constituents we are able to bring and support new and existing technologies to the state of North Dakota. Communications with stakeholders is an important factor and we must work together in making necessary information available to every administrator, faculty, staff, and student across the North Dakota University System campuses.

Strategies

1. To continue monitoring the staffing and availability of the North Dakota University System (NDUS) help desk so that it supports the majority of user needs.
2. To improve communications with all stakeholders of the NDUS Common Information Services (NDUS CIS).
3. To collaborate with NDUS campuses, K-12, state and local governments, and libraries to identify appropriate learning and research support systems.
4. To work with the Online Dakota Information Network (ODIN) libraries to expand virtual and digital holdings.
5. To promote Internet2 and advanced networking.
6. To continue working with state government and K-12 on converged services.
7. To foster efforts that lead to the integration and streamlining of video, audio, and data collaborations in cross-platform environments.

Initiatives

■ **Continue to monitor the staffing levels** and hours of availability of the North Dakota University System (NDUS) help desk so that faculty, staff, students and other constituents have their needs supported.

■ **Search for new and additional ways** to communicate with all stakeholders of the NDUS Common Information Services (NDUS CIS). This could include consolidation of websites and implementation of a website that allows for easier uploading of information that may be useful.

■ **Continue finding ways** that we can work together within the NDUS campuses, K-12, state and local governments, and the libraries to identify appropriate learning and research support systems. Working together – moving forward.

■ **Continue working with Online Dakota Information Network (ODIN)** libraries to find additional ways to expand digital holdings.

■ **Continue promotion of Internet2** and advanced networking across the state of North Dakota. Expand connectivity to the "Northern Tier" network by bringing high speed advanced network endpoints into North Dakota. In turn, an assortment of available enrichment programs in math, the sciences, and arts could be delivered to North Dakota students.

■ **Continue working with state government** and K-12 on converged and collaboration services.

■ **Take a leadership role** in providing ways to streamline and integrate video, audio, and data collaboration across different systems and cross-platform environments.

Accomplishments

■ **The staffing at the North Dakota University System (NDUS) Help Desk** was augmented with student employees to provide first contact support for ConnectND. For 2005-06, over 28,000 calls were received by the NDUS Help Desk with over 25,000 calls being answered and an abandon rate of 6 percent. This low abandon rate was made possible because of the additional student Help Desk employees.

■ **The NDUS Help Desk** also worked with the State of North Dakota's Information Technology Department (ITD) to determine the feasibility of implementing a joint problem tracking system to replace the existing NDUS Help Center (Remedy) and ITD's (FrontRange HEAT) applications. No decision has been made but discussions continue.

■ **Funding from the state** to the State Library expanded the size and scope of the electronic collections available to North Dakota citizens. Several databases were added this biennium.

■ **ODIN worked with NDUS** and other libraries to provide unlimited access to Online Computer Library Center's (OCLC) WorldCat during the last biennium. As of the fall of 2006, the WorldCat database contains over 68 million records representing library materials owned by 9,000 institutions world-wide.

■ **During the past 24 months**, Interactive Video Network (IVN) hosted a number of events that focused on videoconferencing. Such topics included maximizing investments in videoconferencing; using videoconferencing to make meetings work; partnerships, funding and grant resources for videoconferencing; and enhancing interaction in videoconferencing and developing meeting etiquette.

■ **IVN conducts monthly meetings** for NDUS site and technical coordinators and K-12 consortium directors that focus on operations and management. In addition, countless one-on-one and small group training sessions are conducted with users to address on-going issues.

■ **Working with Higher Education**, EduTech and North Dakota K-12 schools collaborated on joint Internet2 projects. One example is the Red River Valley Watershed project, which involves sites in North Dakota, Minnesota, and Manitoba. The project involves high school students working with higher education researchers, doing real-time watershed research. Other K-20 projects in which higher education collaborated with K-12 this past year included events such as Read Across America, Read Across North Dakota, and Foreign Language across North Dakota.

■ **One of the ways we continue to promote Internet2** was through participation in national and global events. Participation this past year included the following events: Megaconference, which featured speakers from across the globe who shared their real-world uses of videoconferencing. The event included approximately 450 sites, 40 presenters, 40 U.S. states, and 40 other countries. The Megaconference Jr., an offspring of the Megaconference, featured presentations by K-12 students around the world. EduTech helped plan this conference and North Dakota K-12 schools participated. At the ViDe Digital Conference North Dakota showcased Telemedicine, Telepharmacy, and the Flatlands Disability Network.

■ **In June, the University of North Dakota (UND) partnered with North Dakota State University (NDSU)** to provide an Internet2 legislative demonstration at UND which included speakers from NDSU, UND, K-12 and the Flatlands Disability Network. Currently, Higher Education and K-12 are partnering with the North Dakota Heritage Center and the Lewis and Clark Interpretive Center for Internet2 sponsorship and access. This will enable these programs to provide content to North Dakota K-12 schools as well as other schools around the world via Internet2.

■ **The North Dakota University System Online (NDUSO)** is an internet-based system-wide collaboration for the delivery of collaborative courses, certificates and programs. From the initial associate in arts degree in 2001, there are now 35 certificates, 41 two-year degrees, 22 four-year programs, and 15 graduate certificates and programs. In addition, there are more than 800 online courses. Enrollment has grown at the rate of over 20 percent each year, up from 350 in 1997 to a duplicated enrollment of more than 25,000 in 2005-2006.

goal(4)

To provide and manage resources to align with North Dakota University System strategic goals

Information technology (IT) is a necessary and increasingly more important resource in achieving the North Dakota University System's goals for student learning, expanded research, and public service. In order for campuses to remain competitive and offer support for students, faculty and staff, we will provide and manage resources to align with the North Dakota University System's strategic goals.

Strategies

1. To identify new resources or re-purpose existing resources to enhance current services or initiate new services.
2. To implement the North Dakota University System (NDUS) Enterprise Project Management Office to provide project management oversight, enterprise architecture administration, and IT planning in conjunction with the NDUS Chief Information Officer (CIO).
3. To provide professional staff to meet North Dakota University System needs.

Initiatives

■ **Now that the initial installation of ConnectND has been completed** across the North Dakota University System (NDUS) institutions, staffing to support ConnectND will be reevaluated. Staffing will be required not only to manage the ongoing operation of the system but also to manage the ongoing changes mandated by vendor upgrades for all three modules of the system.

■ **Implementation of an NDUS Enterprise Project Management Office** is a necessity to better align higher education's requirements regarding management of projects with that of the state, standardize by using the state and higher education's approved IT project management methodology, and to meet IT reporting requirements as set forth in North Dakota Century Code. Additionally, the NDUS Enterprise Project Management Office would become a centralized repository for IT project information on Large Projects as defined by North Dakota Century Code, and be a resource library for information used by project managers within higher education IT.

■ **Organizational changes will be made** to better reflect the needs of the University System as it relates to IT and Common Information Services (CIS).

Accomplishments

■ **Staffing levels to support ConnectND** have been reviewed and proposals are being drawn up to request funding for staff in areas that are needed.

■ **The North Dakota University System (NDUS) has a representative** on the state's Enterprise Project Management Advisory Group who are responsible for making recommendations on IT project management policies, practices and guidelines.

■ **The NDUS has provided leadership** in project management oversight and in reporting NDUS IT large project reporting as per legislative mandate.

Assisted by technology resources, student learning and research are integral to economic development in our state. To support these ends, we will continue our emphasis on recruiting and retaining a trained, professional staff. We continue to promote educational opportunities that bring new knowledge to North Dakota and help tell others the success we have accomplished here by working together. Working together - moving forward, this is and continues to be the vision in our statewide IT plan.

websites and additional info

North Dakota Portal:
www.nd.gov

Information Technology Department (ITD):
www.nd.gov/itd

North Dakota University System (NDUS):
www.ndus.edu

North Dakota University System Online:
www.nduso.org

ND Interactive Video Network (ND IVN):
www.ndivn.nodak.edu

Online Dakota Information Network (ODIN):
www.odin.nodak.edu

Education Technology Council (ETC) :
www.ndetc.k12.nd.us

EduTech:
www.edutech.nodak.edu

ND Division of Independent Study:
www.ndisonline.org

STAGEnet:
www.stagenet.nd.gov

ND Geographic
Information System Hub (GIS):
www.nd.gov/gis

The ND Criminal Justice
Information Sharing Portal (CJIS) :
www.ndcriminaljustice.com

Enterprise Architecture:
www.nd.gov/ea

The 2007-09 State IT Plan:
www.nd.gov/ep/state

North Dakota Statewide
Information Technology Plan
www.nd.gov/ep/state